

Abstract of the Disclosure

An efficient bit interleaving scheme for a multi-band OFDM ultra-wideband (UWB) system. The encoded bits of the multi-band OFDM system are interleaved within each OFDM symbol and across OFDM symbols. The bit interleaving scheme minimizes performance degradation due to groups of contiguous OFDM tones experiencing a poor SNR caused by the frequency selective channel, exploits the frequency diversity across sub-bands, randomizes the effect of co-channel interference from simultaneously operating un-coordinated piconets, and randomizes the impact of generic narrow-band interferers present within the UWB spectrum.